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In accordance with the above amendments, claim 51 has been canceled and claims 25, 26, 36-37, 40-43 and 50 have been amended. New claim 52 has been added.

**Allowable Subject Matter**

Claims 26, 28-29, 33, 37, 39, 41, 45 and 47-49 are allowed. Allowance of these claims is gratefully acknowledged. It is further noted that claims 34-36, 38-40 (38, 40?) and 44-46 are objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. This is also gratefully acknowledged.

**Amendment to the Claims**

The amendments to the claims have been, for the most part, merely for clarification and new claim 52 represents a claim of the scope of former claim 51 with the material formerly referenced written in its entirety.

**Claim Rejections - 35 USC § 103**

It is noted that claims 25, 27, 30-32, 42 and 48 are rejected under 35 USC § 103 as being unpatentable over Cook et al (Key Engineering Material, Vols. 192-195:625-628, 2001). This rejection is respectfully traversed for reasons as will be explained.

Importantly, it should be kept in mind that claims 25, 27, 30-32 and 42 relate to a method of facilitating crystallization of a

macromolecule using mesoporous glass. This is contrasted with Cook et al which relates to finding that a bioactive glass (i.e., a porous glass) which has been used in tissue regeneration grafting consists of a network of interconnected pores with a diameter ranging from 5Å to 20µm. The interconnecting pore network provides a structure allowing the ingress of tissue fluids and sites for the proliferation and differentiation of cells, thereby permitting tissue regeneration (see the introduction on page 625 of Cook et al).

A study of Cook et al, however, reveals no teaching or suggestion that a porous glass could be used to entrap macromolecules or that doing so would encourage nucleation and crystallization. A person skilled in the art would readily appreciate that macromolecules and cells are distinct biological entities that have very different physical and chemical properties (such as, for example, size and charge); consequently, applicants do not consider it obvious to use a porous glass to crystallize a macromolecule simply because Cook et al indicates that it can be used to cause an accumulation of cells.

Furthermore, since the findings of Cook et al indicate that porous glass is advantageous in tissue regeneration and is silent as to any other possible uses of such glass, a skilled person reading Cook et al also would not be motivated to use porous glass for any purpose other than tissue regeneration. Thus, a skilled

person would certainly not be motivated to use porous glass for crystallizing a macromolecule without a specific teaching or suggestion in Cook et al, particularly as crystallization is a biochemical analytical technique and is therefore drawn from a completely different technical field from the medical application of tissue regeneration.

In view of the above, it is believed that the present claims indeed are indicative of a clear inventive step over the cited reference and reconsideration and withdrawal of the rejection is respectfully requested. It is also believed that this should render all the present claims allowable and reconsideration and allowance of all the claims is respectfully requested.

If issues remain which, in the opinion of the Examiner can be resolved by a telephone interview, she is invited to contact the undersigned attorney at her convenience to discuss same in an effort to resolve same and expedite prosecution of this application.

Respectfully submitted,

NIKOLAI & MERSEREAU, P.A.



C. G. Mersereau  
Registration No. 26205  
900 Second Avenue So.  
Suite 820  
Minneapolis, MN 55402  
Telephone: (612) 339-7461

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## CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that the foregoing Amendment in response to the Official Action of August 31, 2006 and a Transmittal Letter in application Serial No. 10/534,088, filed on October 17, 2005, of Naomi Chayen et al, entitled "MESOPOROUS GLASS AS NUCLEANT FOR MACROMOLECULE CYRSTALLISATION", are being sent by facsimile transmission to: The Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on November 28, 2006.



Barbara L. Davis  
on behalf of C. G. Mersereau  
Attorney for Applicant

Date of Signature: November 28, 2006